

**DECLARATION AND POWER OF ATTORNEY**

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention, design or discovery entitled "SYSTEM AND METHOD FOR DETERMINING AN AZIMUTH OF A SEISMIC ENERGY SOURCE," the specification of which is attached hereto.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above;

I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability of this application as defined by Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>NUMBER</u>	<u>COUNTRY</u>	<u>DATE FILED</u>	<u>PRIORITY CLAIMED</u>
	None		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

<u>US/PCT Serial Num</u>	<u>Date Filed</u>	<u>Status</u>
None		

I hereby appoint:

David H. Hitt	Registration No. 33,182
Charles W. Gaines	Registration No. 36,804
Glenn W. Boisbrun	Registration No. 39,615
Mark E. Kelley	Registration No. 45,857
Greg H. Parker	Registration No. 44,995
Jimmy L. Heisz	Registration No. 38,914
J. Joel Justiss	Registration No. 48,981

all of the firm of HITT GAINES & BOISBRUN, P.C. my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, and to file and prosecute any international patent applications filed thereon before any international authorities under the Patent Cooperation Treaty.

Send correspondence to:

Charles W. Gaines  
HITT GAINES & BOISBRUN, P.C.  
P.O. Box 832570  
Richardson, Texas 75083

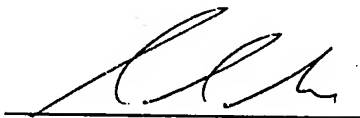
and direct all telephone calls to Charles W. Gaines at (972) 480-8800.

Atty. Docket No.: VECT-0004P1

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole inventor: Allen L. Gilmer

Inventor's signature:



Date: 10/17/2001

Residence:

City of Austin  
County of Travis  
State of Texas

Citizenship:

United States of America

Post Office Address:

1711 Windsor Road  
Austin, Texas 78703

## DECLARATION AND POWER OF ATTORNEY

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention, design or discovery entitled "SYSTEM AND METHOD FOR DETERMINING AN AZIMUTH OF A SEISMIC ENERGY SOURCE," the specification of which is attached hereto.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above;

I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability of this application as defined by Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>NUMBER</u>	<u>COUNTRY</u>	<u>DATE FILED</u>	<u>PRIORITY CLAIMED</u>
	None		

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

<u>US/PCT Serial Num</u>	<u>Date Filed</u>	<u>Status</u>
None		

I hereby appoint:

David H. Hitt	Registration No. 33,182
Charles W. Gaines	Registration No. 36,804
Glenn W. Boisbrun	Registration No. 39,615
Mark E. Kelley	Registration No. 45,857
Greg H. Parker	Registration No. 44,995
Jimmy L. Heisz	Registration No. 38,914
J. Joel Justiss	Registration No. 48,981

all of the firm of HITT GAINES & BOISBRUN, P.C. my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, and to file and prosecute any international patent applications filed thereon before any international authorities under the Patent Cooperation Treaty.

Send correspondence to:

Charles W. Gaines  
HITT GAINES & BOISBRUN, P.C.  
P.O. Box 832570  
Richardson, Texas 75083

and direct all telephone calls to Charles W. Gaines at (972) 480-8800.

Atty. Docket No.: VECT-0004P1

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

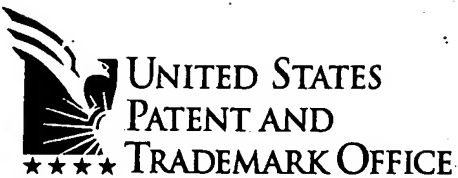
Full name of sole inventor: Bob A. Hardage

Inventor's signature: Bob A. Hardage Date: Nov. 14, 2001

Residence: City of Burnet  
County of Burnet  
State of Texas

Citizenship: United States of America

Post Office Address: 504 County Road 140  
Burnet, Texas 78611



MAR 05 2002

FEBRUARY 28, 2002

PTAS

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov

HITT GAINES & BOISBRUN, P.C.  
CHARLES W. GAINES  
P.O. BOX 832570  
RICHARDSON, TEXAS 75083



\*101942292A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/27/2001

REEL/FRAME: 012431/0008

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

## ASSIGNOR:

GILMER, ALLEN L.

DOC DATE: 10/16/2001

## ASSIGNEE:

VECTA TECHNOLOGY, LP  
5950 CEDAR SPRINGS ROAD, SUITE 200  
A CORPORATION OF TEXAS  
DALLAS, TEXAS 75235

SERIAL NUMBER: 09952430

FILING DATE: 09/14/2001

PATENT NUMBER:

ISSUE DATE:

MARY BENTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

12/27/01

DEC 27 2001

01-11-2002



101942292

DEC 27 2001

VECT-0004P1

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

**Submission Type**

- ☒ New
- ☐ Resubmission (Non-Recordation)  
Document ID#
- ☐ Correction of PTO Error  
Reel #  Frame #
- ☐ Corrective Document  
Reel #  Frame #

**Conveyance Type**

- ☒ Assignment ☐ Security Agreement
- ☐ License ☐ Change of Name
- ☐ Merger ☐ Other
- U.S. Government**  
(For Use ONLY by U.S. Government Agencies)
- ☐ Departmental File ☐ Secret File

**Conveying Party(ies)**

☐ Mark if additional names of conveying parties attached

Name (line 1)  Execution Date  
Month Day Year  
10 16 2001

**Second Party**

Name (line 1)  Execution Date  
Month Day Year  
Name (line 2)

**Receiving Party**

☐ Mark if additional names of receiving parties attached

Name (line 1)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)     
City State/Country Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

01/10/2002 GTOW11 00000129 09952430

01 FC:581

40.00 OP

FOR OFFICE USE ONLY



**Correspondent Name and Address**

Area Code and Telephone Number (972) 480-8800

Name Charles W. Gaines

Address (line 1) Hitt Gaines & Boisbrun, P.C.

Address (line 2) P.O. Box 832570

Address (line 3) Richardson, Texas 75083

Address (line 4)

**Pages**

Enter the total number of pages of the attached conveyance document including any attachments.

# 4

**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

09/952,430

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year  
10 16 2001

**Patent Cooperation Treaty (PCT)**

Enter PCT application number

only if a U.S. Application Number has not been assigned.

PCT PCT PCT  
PCT PCT PCT

**Number of Properties**

Enter the total number of properties involved.

# 1

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:

Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Enclosed ☒ Deposit Account ☐

Deposit Account Number:

#

Authorization to charge additional fees:

Yes ☐ No ☐

**Statement and Signature**

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Charles W. Gaines

Name of Person Signing

Signature

11/21/2001

Date

ASSIGNMENT

WHEREAS, I, Allen L. Gilmer, a citizen of United States of America and resident of Travis County, and the State of Texas, have invented certain new and useful improvements in a "SYSTEM AND METHOD FOR DETERMINING AN AZIMUTH OF A SEISMIC ENERGY SOURCE" disclosed in an application for United States Letters Patent (Application No. 09/952,430, filed 09/14/2001), said application having been previously executed.

WHEREAS, Vecta Technology, L.P., a corporation of the State of Texas, having offices at 5950 Cedar Springs Road, Suite 200, Dallas, Texas 75235 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the invention, and in and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations; continuations-in-part and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom, insofar as my interest is concerned, to the said ASSIGNEE of my entire right, title and interest.

I also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

I hereby further agree that I will communicate to said ASSIGNEE, or to its successors, assigns and legal representatives, any facts known to me respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, and make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 10 day of October, 2001.



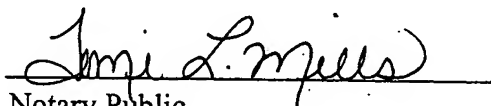
Allen L. Gilmer

STATE OF Texas

COUNTY OF Tarrant

§  
§  
§

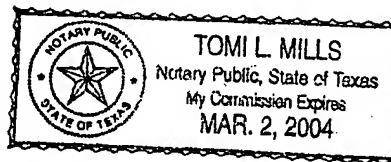
On this 10 day of October, 2001, before me personally came Allen L. Gilmer, to me known to be the individual described herein and who executed the foregoing instrument, and acknowledged execution of the same.

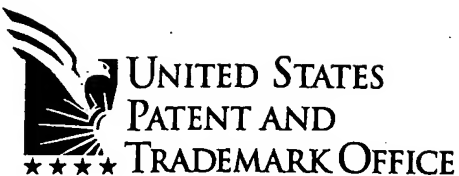


Notary Public

My Commission Expires:

March 2, 2004





MAR 05 2002

FEBRUARY 28, 2002

PTAS

HITT, GAINES & BOISBRUM, P.C.  
CHARLES W. GAINES  
P.O. BOX 832570  
RICHARDSON, TX 75083

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov



\*101942291A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/27/2001

REEL/FRAME: 012430/0996

NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HARDAGE, BOB A.

DOC DATE: 10/14/2001

ASSIGNEE:

BOARD OF REGENTS FOR THE  
UNIVERSITY OF TEXAS SYSTEM  
201 WEST 7TH STREET  
AUSTIN, TEXAS 78701

SERIAL NUMBER: 09952430

FILING DATE: 09/14/2001

PATENT NUMBER:

ISSUE DATE:

SHARON LATIMER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

01-11-2002



101942291

12/27/01

DEC 27 2001

VECT-0004P1

# RECORDATION FORM COVER SHEET PATENTS ONLY

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

## Submission Type

- ☒ New
- ☐ Resubmission (Non-Recordation)  
Document ID#
- ☐ Correction of PTO Error  
Reel #  Frame #
- ☐ Corrective Document  
Reel #  Frame #

## Conveyance Type

- ☒ Assignment ☐ Security Agreement
- ☐ License ☐ Change of Name
- ☐ Merger ☐ Other
- U.S. Government**  
(For Use ONLY by U.S. Government Agencies)
- ☐ Departmental File ☐ Secret File

## Conveying Party(ies)

- ☐ Mark if additional names of conveying parties attached
- Name (line 1)  Execution Date  
Month Day Year
- Name (line 2)

## Second Party

- Name (line 1)
- Name (line 2)
- Execution Date  
Month Day Year

## Receiving Party

- ☐ Mark if additional names of receiving parties attached
- Name (line 1)
- Name (line 2)
- Address (line 1)
- Address (line 2)
- Address (line 3)
- City State/Country Zip Code
- ☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

## Domestic Representative Name and Address

Enter for the first Receiving Party only.

- Name
- Address (line 1)
- Address (line 2)
- Address (line 3)
- Address (line 4)

## FOR OFFICE USE ONLY

01/10/2002 6TOM11 00000130 09952430

01 FC:581

40.00 OP

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to:  
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

**Correspondent Name and Address**

Area Code and Telephone Number (972) 480-8800

Name Charles W. Gaines

Address (line 1) Hitt Gaines & Boisbrun, P.C.

Address (line 2) P.O. Box 832570

Address (line 3) Richardson, Texas 75083

Address (line 4)

**Pages**

Enter the total number of pages of the attached conveyance document including any attachments.

# 4

**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

09/952,430

Patent Number(s)

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year  
10 14 2001

**Patent Cooperation Treaty (PCT)**

Enter PCT application number

only if a U.S. Application Number has not been assigned.

PCT PCT PCT  
PCT PCT PCT

**Number of Properties**

Enter the total number of properties involved.

# 1

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:

Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Enclosed ☒

Deposit Account ☐

Deposit Account Number:

#

Authorization to charge additional fees:

Yes ☐

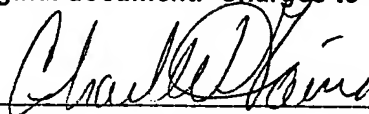
No ☐

**Statement and Signature**

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Charles W. Gaines

Name of Person Signing



Signature

11/21/2001

Date

ASSIGNMENT

WHEREAS, I, Bob A. Hardage, a citizen of United States of America and resident of Burnet County, and the State of Texas, have invented certain new and useful improvements in a "SYSTEM AND METHOD FOR DETERMINING AN AZIMUTH OF A SEISMIC ENERGY SOURCE" disclosed in an application for United States Letters Patent (Application No. 09/952,430, filed 09/14/2001), said application having been previously executed.

WHEREAS, Board of Regents for the University of Texas System, a corporation of the State of Texas, having offices at 201 West 7th Street, Austin, Texas 78701 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the invention, and in and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest in and to said invention and in and to said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, continuations-in-part and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom, insofar as my interest is concerned, to the said ASSIGNEE of my entire right, title and interest.

I also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said application throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

I hereby further agree that I will communicate to said ASSIGNEE, or to its successors, assigns and legal representatives, any facts known to me respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and substitute applications, and make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 14<sup>th</sup> day of November, 2001.

Bob A. Hardage  
Bob A. Hardage

STATE OF Texas  
COUNTY OF Travis

§  
§  
§

On this 14 day of November, 2001, before me personally came Bob A. Hardage, to me known to be the individual described herein and who executed the foregoing instrument, and acknowledged execution of the same.

Lynda A. Miller  
Notary Public

My Commission Expires:

# 8/28/05